**WHAT IS CLAIMED IS:**

1. An apparatus for controlling a fingerprint sensor temperature, comprising:

a power source;

a temperature sensor for detecting the fingerprint sensor temperature;

a semiconductor assembly interposed between the fingerprint sensor and the power source for cooling or heating the fingerprint sensor according to a direction of the current from the power source; and

a controller controlling the power source based on the fingerprint sensor temperature.

2. The apparatus of claim 1, wherein the power source comprises a DC source.

3. The apparatus of claim 1, wherein the semiconductor assembly comprises an n-type semiconductor, a p-type semiconductor, an electrode for conjunction between the n-type semiconductor and the p-type semiconductor, two counter electrodes respectively connected to the power source in series, and an intermediate element for heat transfer between the electrode and the fingerprint sensor.

4. The apparatus of claim 3, wherein the intermediate element is formed with silicon.

5. The apparatus of claim 4, wherein:

in the case that the detected fingerprint sensor temperature is within a predetermined temperature range, the controller controls the power source to be off;

in the case that the detected fingerprint sensor temperature is higher than the highest temperature of the predetermined temperature range, the controller controls the power source

to supply a reverse bias current to the semiconductor assembly; and

in the case that the detected fingerprint sensor temperature is lower than the lowest temperature of the predetermined temperature range, the controller controls the power source to supply a forward bias current to the semiconductor assembly.

6. The apparatus of claim 5, wherein the predetermined temperature range includes 25℃ to 37℃.

7. The apparatus of claim 1, further comprising a door unlock sensor, wherein the controller connects the power source to the semiconductor assembly only if a door unlock signal is detected by the door unlock sensor.

8. A method for controlling a fingerprint sensor temperature, utilizing a thermoelectric semiconductor assembly connected to a power source, comprising:

detecting the fingerprint sensor temperature, determining whether the detected fingerprint sensor temperature is within a predetermined temperature range;

cutting off the power source to the semiconductor assembly if the detected fingerprint sensor temperature is within the predetermined temperature range;

applying a reverse bias current to the semiconductor assembly from the power source if the detected fingerprint sensor temperature is higher than the highest temperature of the predetermined temperature range; and

applying a forward bias current to the semiconductor assembly from the power source if the detected fingerprint sensor temperature is lower than the lowest temperature of the predetermined temperature range.

9. The method of claim 8, further comprising detecting a door unlock signal before detecting the fingerprint sensor temperature, wherein the semiconductor assembly is connected to the power source if the door unlock signal is detected.

10. The method of claim 8, wherein the power source is a DC source.

11. The method of claim 8, wherein the semiconductor assembly is a thermoelectric semiconductor assembly.

12. An apparatus for controlling temperature of a fingerprint sensor, comprising:

a power source;

a temperature sensor configured to sense temperature at the fingerprint sensor;

a semiconductor assembly configured and dimensioned to be disposed between the fingerprint sensor and said power source;

a controller communicating with said power source and receiving signals from said temperature sensor, said controller being programmed to turn off the power source when the sensed temperature is within a predetermined range, supply a reverse bias current from the power source to the semiconductor assembly when the sensed temperature is higher than the predetermined range; and supply a forward bias current from the power source to the semiconductor assembly when the sensed temperature is lower than the predetermined range.

13. The apparatus of claim 12, wherein said semiconductor assembly comprises a thermoelectric semiconductor assembly and the power source is a DC power source.

14. The apparatus of claim 12, wherein said semiconductor assembly comprises:

an n-type semiconductor;

a p-type semiconductor;

an electrode extending between said semiconductors;

an intermediate element formed on said electrode and configured for contact with the fingerprint sensor; and

a counter electrode connected between each semiconductor and the power source.

15. The apparatus of claim 14, wherein said intermediate layer is a silicon layer for facilitating heat transfer.